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Daffodil International University

Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Midterm Examination Fall 2025

Course Code: 0512-1207 | **Section: 252 (A+B)** | **Course Title:** Microbial Genetics
Level and Term: L-1, T-2 | **Course Teacher Initials:** DMI & DSR
Time: 1 Hour 30 Minutes | **Total Marks:** 25

Splitting any answer is strictly prohibited

				Marks
1	(a)	Explain the concept of bacterial DNA replication and viral DNA replication.	[CLO1, PLO1, C2]	2
	(b)	Discuss the process of bacterial DNA replication using diagram.	[CLO1, PLO1, C6]	3
2	(a)	Explain the terms bacterial gene transfer and bacterial transduction.	[CLO4, PLO3, C2]	2
	(b)	Discuss the process of bacterial transduction with diagrams.	[CLO5, PLO5, C6]	3
3	(a)	Elucidate the different types of plasmids.	[CLO2, PLO2, C5]	2
	(b)	Demonstrate and explain the structure of a plasmid with a well-labeled diagram.	[CLO2, PLO2, C2]	3
4	(a)	State the terms antibiotic resistance and superbugs. Write the names of any two antibiotics.	[CLO2, PLO1, C2]	2.5
	(b)	Discuss the causes of antibiotic resistance mechanism.	[CLO2, PLO1, C6]	2.5
5	(a)	Explain the process of bacterial conjugation.	[CLO3, PLO7, C2]	3
	(b)	Distinguish between lytic and lysogenic cycles.	[CLO6, PLO4, C4]	2